



IN THE CLAIMS:

The following is a complete listing of the claims in this application, reflects all changes previously made to the claims, and replaces all earlier versions and all earlier listings of the claims:

1. (Previously Presented) A recording apparatus for forming a color image on a recording material using a recording head having a plurality of recording elements, said apparatus comprising:

a recording head driving means for driving the recording elements of the recording head in accordance with image data to form an image on the recording material;

a plurality of supplementing means for effecting supplementations, in different manners, for supplementing defects in a recorded image resulting from a non-operating recording element of the recording elements of the recording head; and

a control means for selectively operating said plurality of supplementing means depending on an image to be printed to effect the supplementation.

2. (Previously Presented) An apparatus according to Claim 1, wherein said plurality of supplementing means comprises a first supplementing means for effecting supplementation for a recording position which is to be recorded by the non-operating recording element with a color which is different from a color of said non-operating recording element.

3. (Previously Presented) An apparatus according to Claim 1, wherein said plurality of supplementing means comprises a second supplementing means for effecting supplementation for the defect by correcting image data corresponding to a recording element adjacent to the non-operating recording element, on the basis of image data corresponding to the non-operating recording element.

4. (Canceled)

5. (Previously Presented) An apparatus according to Claim 1, wherein said control means selects said plurality of supplementing means in accordance with a duty of the image to be recorded.

6. (Original) An apparatus according to Claim 1, wherein when the image to be recorded has a high duty, said control means selects said first supplementing means, and when the image to be recorded has a low duty, said control means selects said second supplementing means.

7. (Previously Presented) An apparatus according to Claim 2, wherein said first supplementing means effects a recording with different colors, and effects the recording with the same colors as the non-operating recording elements but with similar lightnesses.

8. (Previously Presented) An apparatus according to Claim 7, wherein said first supplementing means comprises a correcting means for correcting image data corresponding to the non-operating recording elements in accordance with the color corresponding to the recording elements effecting the supplementation, said first supplementing means effecting the supplementation on the basis of the image data corrected by said correcting means.

9. (Original) An apparatus according to Claim 3, wherein said second supplementing means corrects an image density indicated by the image data corresponding to the recording element which is adjacent to the non-operating recording element in accordance with the image density indicated by multi-value image data for the non-operating recording element.

10.-12. (Canceled)

13. (Previously Presented) A method for forming a color image on a recording material in accordance with image data, using a recording head having a plurality of recording elements, said method comprising the steps of:

identifying a non-operating recording element of the plurality of recording elements;
discriminating an image recorded by the recording head;

providing different supplementing manners for supplementing defects in a recorded image resulting from a non-operating recording element of the plurality of recording elements, selecting a supplement manner from the different supplementing manners depending on an image to be printed, and effecting control in accordance with the selected manner; and

effecting recording with supplementation for the non-operating recording element through the selected manner.

14. (Previously Presented) A method according to Claim 13, wherein said step of providing different supplementing manners comprises a first supplementing step, of effecting supplementation for a recording position which is to be recorded by the non-operating recording element with a color which is different from a color of the non-operating recording element.

15. (Previously Presented) A method according to Claim 13, wherein said step of providing different supplementing manners comprises a second supplementing step, of effecting supplementation for the defect by correcting image data corresponding to a recording element adjacent to the non-operating recording element, on the basis of image data corresponding to the non-operating recording element.

16. (Canceled)

17. (Previously Presented) A method according to Claim 14, wherein said first supplementing step includes recording with different colors, and recording with the same colors as the non-operating recording elements but with similar lightnesses.

18. (Previously Presented) A method according to Claim 17, wherein said first supplementing step comprises a correcting step, of correcting image data corresponding to the non-operating recording elements in accordance with the color corresponding to the recording element

effecting the supplementation, said first supplementing step effecting the supplementation on the basis of the image data corrected in said correcting step.

19. (Previously Presented) A method according to Claim 15, wherein said second supplementing step includes correcting an image density indicated by the image data corresponding to the recording element which is adjacent to the non-operating recording element in accordance with the image density indicated by multi-value image data for the non-operating recording element.

20. (Canceled)

21. (Previously Presented) A method according to Claim 13, wherein the non-operating recording element comprises a recording element which has become incapable of performing a recording operation.

22. (Canceled)

23. (Previously Presented) A recording apparatus for forming a color image on a recording material using a recording head having a plurality of recording elements, said apparatus comprising:

a recording head driving means for driving the recording elements of the recording head in accordance with image data to form an image on the recording material; and

a supplementing means for effecting supplementation recording with ink having a color different from the color to be printed by a non-operating recording element and having a

lightness similar to that of the color to be printed by the non-operating recording element, for a recording position which is to be recorded by the non-operating recording element.

24. (Previously Presented) An apparatus according to Claim 23, wherein said supplementing means comprises a correcting means for correcting image data corresponding to the non-operating recording element in accordance with the color with which the supplementation is to be effected, said supplementing means effects the supplementation on the basis of the image data corrected by said correcting means.

25.-27. (Canceled)

28. (Previously Presented) A recording method for forming a color image on a recording material with different colors, using a recording head having a plurality of recording elements, comprising the steps of:

identifying a non-operating recording element of the plurality of recording elements;
and

effecting supplementation recording with ink having a color different from the color to be printed by a non-operating recording element and having a lightness similar to that of the color to be printed by the non-operating recording element for a recording position which is to be recorded by the non-operating recording element.

29. (Previously Presented) A method according to Claim 28, wherein said step of effecting supplementation recording comprises a correcting step, of correcting image data

corresponding to the non-operating recording element in accordance with the color with which the supplementation is to be effected, wherein said step of effecting supplementation recording includes effecting the supplementation on the basis of the image data corrected in said correcting step.

30. (Previously Presented) A method according to Claim 28, wherein the non-operating recording element comprises a recording element which has become incapable of performing a recording operation.

31. (Previously Presented) A method according to Claim 28, wherein the recording head comprises a plurality of nozzles, and wherein the ink is ejected from the plurality of nozzles by driving the recording element.

32. and 33. (Canceled)

34. (Previously Presented) A recording apparatus for forming a color image on a recording material using a recording head having a plurality of recording elements, said apparatus comprising:

a recording head driving means for driving the recording elements of the recording head in accordance with image data to form an image on the recording material; and

a supplementing means for effecting supplementation recording with a recording element for black color recording, for a recording position corresponding to a non-operating recording element among the recording elements for non-black color recording.

35. (Previously Presented) An apparatus according to Claim 34, wherein said supplementing means comprises a correcting means for correcting the image data corresponding to the non-operating recording element in accordance with a color indicated by the image data, and said supplementing means effects the recording on the basis of the image data corrected by said correcting means.

36.-38. (Canceled)

39. (Previously Presented) A recording method for forming a color image on a recording material using a recording head having a plurality of recording elements, said method comprising the steps of:

recording an image on the recording material by driving a plurality of recording elements of the recording head in accordance with image data; and

effecting supplementation recording with a recording element for black color recording, for a recording position corresponding to a non-operating recording element among the recording elements for non-black color recording.

40. (Previously Presented) A method according to Claim 39, wherein said step of effecting supplementation recording comprises a correcting step, of correcting the image data corresponding to the non-operating recording element in accordance with a color indicated by the image data, and said step of effecting supplementation recording includes effecting the recording on the basis of the image data corrected in said correcting step.

41. (Previously Presented) A method according to Claim 39, wherein the non-operating recording element comprises a recording element which has become incapable of performing a recording operation.

42. (Previously Presented) A method according to Claim 39, wherein said recording head comprises a plurality of nozzles, and wherein the ink is ejected from the plurality of nozzles by driving the recording element.

43. and 44. (Canceled)

45. (Previously Presented) A recording apparatus for forming a color image on a recording material using a recording head having a plurality of recording elements, said apparatus comprising:

an inputting means for inputting multi-value image data indicative of an image density;

a correcting means for correcting image data corresponding to a recording element which is adjacent to a non-operating recording element of the plurality of recording elements;

a generating means for generating driving data, indicative of actuation or non-actuation, for driving the recording elements corresponding thereto on the basis of the multi-value image data corrected by said correcting means; and

a control means for controlling the recording elements of the recording head in accordance with the driving data thus generated to effect recording.

46. (Original) An apparatus according to Claim 45, wherein said correcting means corrects multi-value image data corresponding to the recording element located adjacent to the non-operating recording element.

47. (Canceled)

48. (Previously Presented) A method for forming a color image on a recording material in accordance with image data, using a recording head having a plurality of recording elements, said method comprising the steps of:

inputting multi-value image data indicative of an image density;

identifying a non-recording element of the plurality of the recording elements on the basis of a variation in densities of a test pattern recorded by the recording head;

correcting, on the basis of the variation of the densities, image data corresponding to respective recording elements to raise an image density of the image data for the recording element which is adjacent to the non-operating recording element;

generating driving data, indicative of actuation or non-actuation, for driving the recording elements corresponding thereto on the basis of the multi-value image data corrected in said correcting step; and

controlling the recording elements of the recording head in accordance with the driving data thus generated to effect recording.

49. (Previously Presented) A method according to Claim 48, wherein said

correcting step includes correcting multi-value image data corresponding to the recording element located adjacent to the non-operating recording element.

50. (Previously Presented) A method according to Claim 48, wherein the non-operating recording element comprises a recording element which has become incapable of performing a recording operation.

51. (Canceled)